2018

CATASTROPHIC FUTURES

Robby Hardesty
University of Kentucky, rhardesty@uky.edu
Author ORCID Identifier:
https://orcid.org/0000-0001-8611-9210
Digital Object Identifier: https://doi.org/10.13023/etd.2018.291

STUDENT AGREEMENT:

I represent that my thesis or dissertation and abstract are my original work. Proper attribution has been given to all outside sources. I understand that I am solely responsible for obtaining any needed copyright permissions. I have obtained needed written permission statement(s) from the owner(s) of each third-party copyrighted matter to be included in my work, allowing electronic distribution (if such use is not permitted by the fair use doctrine) which will be submitted to UKnowledge as Additional File.

I hereby grant to The University of Kentucky and its agents the irrevocable, non-exclusive, and royalty-free license to archive and make accessible my work in whole or in part in all forms of media, now or hereafter known. I agree that the document mentioned above may be made available immediately for worldwide access unless an embargo applies.

I retain all other ownership rights to the copyright of my work. I also retain the right to use in future works (such as articles or books) all or part of my work. I understand that I am free to register the copyright to my work.

REVIEW, APPROVAL AND ACCEPTANCE

The document mentioned above has been reviewed and accepted by the student's advisor, on behalf of the advisory committee, and by the Director of Graduate Studies (DGS), on behalf of the program; we verify that this is the final, approved version of the student's thesis including all changes required by the advisory committee. The undersigned agree to abide by the statements above.

Robby Hardesty, Student

Dr. Andrew Wood, Major Professor

Dr. Andrew Wood, Director of Graduate Studies

CATASTROPHIC FUTURES

THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Arts in the
College of Arts and Sciences
at the University of Kentucky

by

Robby Hardesty

Lexington, Kentucky

Director: Dr. Andrew Wood, Professor of Geography

Lexington, Kentucky

2018

ABSTRACT OF THESIS

CATASTROPHIC FUTURES

By means of a peculiar magic, insurance preserves the quantified value of capital through destructive, contingent events. The principal subjects of this project, global reinsurers, stand at the end of a long line of loss claims, holding capital together as forces threaten to tear it apart. The apocalyptic imaginaries of climate change portend events that will be increasingly destructive to capital, and insurers counter with new products and narratives. In examining reinsurers and the catastrophes they protect against, this project questions how novelty emerges from the eternal return of the same. I show how power is inscribed in the landscape, maintained through the ritual of daily reproduction, and protected from looming outliers to build a long inheritance. Using Walter Benjamin's meditations on violence, I then explore the swerves and breaks that might make the world otherwise.

KEYWORDS: insurance, catastrophe, novelty, violence, apocalypse

Robby Hardesty

Feb. 12, 2018

CATASTROPHIC FUTURES

By

Robby Hardesty

_____Andrew Wood_____
Director of Thesis

_____Andrew Wood_____
Director of Graduate Studies

_____Feb. 12, 2018_____

TABLE OF CONTENTS

I. The Time of Hell

> "Unreal City,
> Under the brown fog of a winter dawn,
> A crowd flowed over London Bridge, so many,
> I had not thought death had undone so many.
> Sighs, short and infrequent, were exhaled,
> And each man fixed his eyes before his feet.
> Flowed up the hill and down King William Street,
> To where Saint Mary Woolnoth kept the hours
> With a dead sound on the final stroke of nine."
>
> T.S. Eliot, "The Waste Land" (2001, 60-68)

Suffused through everything, the specter of the Unreal -- a foreboding weight to the atmosphere. The air is tainted, suspended with particulates, poisonous. A mass of the undead flows over London Bridge and into the City. There is a feeling in the air of the *appending* -- we expect what happens next. What is possible is encoded in a loose, light admixture swirling *at the edge* of things: a surface effect.

The sleepwalking hordes -- "so many" -- are a *flood*. They surge into the City, "up the hill," high tide. They are soaked up into towers to clerk financial accumulation. They have fallen into a trap, repeating the same ritual in a loop. It takes on the shape of a dream. But what else can you do but fall into a loop, when you can't wake up, when you don't even know you're asleep?

The clock, the colossal signifier, intones the time and drives this dead mass on -- it bids its pilgrims and they *feel* they are due, in their bones: every brown and foggy morning, crossing the bridge, beginning and beginning again. Susan Buck-Morss says that such "deadly repetitiveness of time […] describes what is truly modern and novel about commodity society" (96). This is Walter Benjamin's "time of hell" (*AP* 544, [S1,5])[1], in which the unfolding of the everyday resembles the tumbling, wild shapes of a kaleidoscope -- "every turn of the hand dissolves the established order into a new array" (*AP* 339, [J61a,2]). The kaleidoscope's mirrors hold everything together: novelty is perpetually enrolled in the reproduction of the same.

The latest fashion always occurs "in the medium of what has been" (*AP* 64, [B1a,2]) -- that is, in the service of an endless line of victors, always in a different costume, rolling the barbaric stone wheels of History again and again over the prostrate anonymous. The way out of this eternal recurrence is paradoxically only through *true* novelty, says Benjamin, a "genuine originality" (*AP* 288, [J33,4]). *This* "new" "must be wrested heroically from what is always again the same." (*AP* 366, [J60,7]). The kaleidoscope must be smashed (1939a, 164); the relations that we've inherited must be swept away. Here, "where origin and destruction come together […], not a new man [but] a monster, a new angel" (1931b, 457).

But what compels the return?

II. The Preamble of Horror

> "Capitalism is the celebration of a cult without dream or mercy. There are no 'weekdays.' There is no day that is not a feast day, in the terrible sense that all its sacred pomp is unfolded before us; each day commands the utter fealty of each worshiper."
>
> Walter Benjamin, "Capitalism as Religion" (1921c, 288)

The situation is obviously dire. To be alive today is to have the atmosphere around your head charged with electric terror. Climate science indicates we find ourselves here in the preamble of horror. Ours is the experience of waking into a ruined world. What are you supposed to do in a ruined world? Every morning has you by the throat. We are exposed even in our mothers' wombs (Benjamin 1939b, 231).

The violence that creates and preserves the law presupposes itself and appears as pre-accomplished[2]. The odds are stacked against us -- a robot will fly to my apartment window and disembowel me -- *eat* -- *feast* -- *reap* -- in a normal and unexceptional exercise of extraordinary, unprecedented power. I have been born *prey*. Violence becomes pre-accomplished through the iterative and embodied practices of the everyday.

It is one of the primary aims of this project to confront this problem of pre-accomplished violence. When the present battle -- when *today's* battle -- has already been won, and its proceeds pocketed; when power has been built into the landscape; when the ritual of the everyday builds and accumulates this power; when the violence with which to dominate you *comes with you*, as part of you -- when you come into the world *already marked* -- then you can only take reeling and back-pedaling counter-measures. "We know what to do with people shaped like you, we know where you go." How do we fight against this pre-accomplished power, that watches everything we do, hears everything we say, and prowls around, guns out?[3]

III. The Fly Is Already Mapped

> "The production of the spider's web [is] a kind of spatial counterpoint to the movements of the fly. […] The size of the net, its holes and gridding, is an exact measure of the size of the fly. The fly is contrapuntal to the web -- or, equally, the fly, the web, and the spider form a unique coupling, a milieu qualitatively inducing and selected for specific pairings, specific productions […]. The fly is already mapped, signaled, its place accommodated in the spider's bodily behavior before any particular spider has encountered any particular fly."

Elizabeth Grosz, *Chaos, Territory, Art* (2008, 45)

Power is not something that anyone has or holds, but something that seems to "come from everywhere" -- it is immanent. It emerges as the "*immediate effect* of the divisions, inequalities, and disequilibriums" that occur in relationships, but is also the "*internal conditions* of these differentiations" (Foucault 1978, 93-4). Power exists *because* of these differences, at the same time that it *produces* them, simultaneously unfolding and fixing -- emerging and structuring -- in which contingencies are concretized through the repetitive and routinized actions of the everyday. Things exist because they persist.

Through this material fixing, power is *built in* to the environment -- the fly's world comes already with a web spun precisely for *it*. If the fly is already mapped, then *I* am already mapped. We are attuned to the structures of the landscape, and the landscape is attuned to us. Relationships are encoded: the built environment and the social formations playing out across it pre-dispose and pre-distribute power: "The earth is already directly inscribed contrapuntally in the body," says Grosz (49).

"Relations do not follow relata, but the other way around," says Karen Barad (2007, 136-7). Our environment is the accretion of *inherited patterns of flows of force* which have been *materially encoded* into the landscape. In every iteration this inheritance is re-written, and re-written differently in every iteration, by every iterator -- but the relation obtains.

Katherine McKittrick says that through such processes of "repetitive spatialization," difference is embedded in the landscape, and naturalized as "where social order happens." Difference is *placed* into a "classificatory *where*" (2006, xiv). The inertia caught up in the stability of these *material supports* forecloses possible futures. Our world comes riddled with traps, filled with spiders all sucking dollars out of you. You are captured, and realize you have always been captured: you are born charging into your pre-categorized, pre-identified exterior, and you are given names and grades and ranks and touched and poked and worked and taxed, in perpetual examinations. We wear as our interior what's been pinned on us and held there with the threat of violence: our name, our sex, our soul.

One of the overarching preoccupations of this project is the way that immanent power relations become stabilized and anchored into bodies and landscapes, at which point power becomes pre-accomplished. The "historical sedimentation of… regulatory fictions" (Braidotti 2002, 41) is marked on bodies as "scopic branding" (Weheliye 2014, 69). The social is a web of relations that is "sticky: it catches on as it goes" (Braidotti 2002, 144). The landscape "is a pregiven counterpoint with which the living being must harmonize if it is to survive" (Grosz 2008, 44). We *must* fit, and so we are stuck.

IV. Inheritance and Iteration

> "The time that was yet to come was, as it were, all rolled up into the past, like a scroll, and became a sort of *underworld of the future*."
>
> Walter Benjamin, "Theological Criticism" (1931a, 429)

The crux of the problem investigated in this project is "immanent structure." In conditions of perpetual becoming, what persists? We will think here of every moment as a new origin, a set of "initial conditions" from which anything may emerge. Initial conditions are a perpetually changing, but long and sticky, inheritance that we carry into the world. Here I combine inheritance and iteration, conceptualizing the two together as *inheritance as initial condition*. Every inheritance, every newly-originary moment, is new nature. *Nature* is immanent structure.

Every morning, the world pours in again -- this is our inheritance: what we face and what we face it with, all building up or wearing away from yesterday. Our inheritance contains everything -- our networks of care, the built environment of the places we live, the innumerable guns, helicopters, and gallons of gasoline, logs of debt, and modes of production we find when we wake up. I aim to take stock here of "that which is given," and to think about this "inheritance" in three different time registers -- daily or evental; generational; and dynastic or epochal.

We begin with the everyday -- the return across the bridge. Accreting and eroding, history moves in slow motion: a slowly piling up and becoming-packed, becoming-Earth. History concretizes -- histories "congeal as habits or shared routines" (Ahmed 2017, 106), creating brick walls, or laying down bedrock. For Sara Ahmed, this hardening of history occurs when tendencies and flows become automatic -- channels deepen, relations harden, and the landscape takes shape and is naturalized through a constantly reiterated performance.

Equally slowly, history moves by wearing away, becoming-dust. The landscape is like dunes, distributions of settled and moving sand. In this small, everyday way, there are enormous forces at work: forces holding things together, and forces tearing them apart.

There are also any number of punctuating events, which break an inheritance and ripple through history forming a *new succession*. Such events affect generational inheritance, which moves much differently than the daily cycles that make it up. These events are changes in *regime* -- a new king, a new keystone species -- or otherwise major *breaks* and *swerves*. Generational inheritances move in two ways. First, as a *giving-down*: this kind of inheritance marks a *dispersion* -- it is divided amongst successors, and everywhere re-generates itself differently.

But generational inheritance also moves as a *taking-up* -- as Benjamin would put it, the awakening of a collective into its political moment -- a *seizure* of all that has been made:

a generation emerges out of its collective childhood with individuals working either to preserve, or swerve, their inherited condition.

Everyday life builds on itself as accretions and erosions, piling up and wearing away on a constantly-shifting surface. Longer scales reveal deeper bedrocks. These move only in discontinuous and violent lunges: bedrock only moves by breaking. In doing so, it sends ripples through the surface, shaping surface accumulations.

Identities emerge through these long-term social, historical, and spatial processes that "are lost to the subject herself," says Mary Thomas (2011, 108). Or as Judith Butler (1993) puts it, "There is a history to my body of which I can have no recollection" (cited in Thomas, 183). The history you inherit, and the events that have given shape to the categories pinned on you, are so many deep cracks in the bedrock of history: you are at the swirling edge. These cracks are still slipping: the past is continually creative, streaming out effects which retroactively posit so many causes. The surface of the body is an earthquake, a pile of rubble to which different names, according to different surface arrangements, are attached.

Power is preserved by daily re-accreting what erodes, and maintaining these accumulations across the jolts and fractures that ripple through the slow-motion backdrop of daily inheritance. Here we see our third, long-term, time-scale emerge. The strategies that are employed to maintain inheritances through catastrophic contingent events -- to keep everything together, to build an epoch -- makes up the remainder of this paper.

History moves without a goal, but it is carried by momentum, leaning in certain directions. A concentrated accumulation of power means a concentrated inheritance. To see the future, and understand the present, we must turn our gaze to the past. As it recedes, its vanishing peaks stand out dimly lit against the horizon, and we can see in this contour the shape of the future behind us[4]. "Our coming was expected on Earth," says Benjamin (1940a, 390). We are *intimated* in this past (1937), to twinned effects: if our coming was expected, we have already been mapped; our future is foreclosed. But, if every interaction with the past is *creative* (1931c, 464), we can bring *up* all that has been forgotten; we can redeem those who have been lost in History.

V. Channel and Flood

1. Changing Channels

> "We forget too easily that exploitation is first of all a spatial term. […] The [initial] condition is indeed determinant. […] Paths have already been cleared, and classifications are in place. Long before the forces enter into relation, before the confrontation takes place […], some un-named predecessor has chosen the site of combat, and the peaks that determine it. Strategy is […] first and foremost a topology."

Michele Serres, *The Birth of Physics* (2000, 116)

How do we confront this world, pre-channeled and already laid with traps? How do we break out of the eternal return of the same? Perhaps we may find inspiration in the figure of the flood. What happens when an overwhelming flow suddenly bursts along these channels?

In a flash flood, water "arrives extremely suddenly, brooks no obstacles, and develops incredible force. [...] Their rarity, in conjunction with their great destructive force, virtually precludes structural precautions." (Munich Re 2016, 40).

A flash flood changes the shape of its channel -- it carves its way. Michele Serres (2000) says the old adage -- that you can never stand in the same river twice -- is wrong, because a river runs back against itself, and after it empties into the sea it is rained back onto the Earth again. It is the channel that is at every moment different, as the perpetual flow perpetually erodes the banks that contain it. Overwhelming the channel can change its direction. When the routine changes, a new world emerges.

2. Defeating Time

Ben Lerner's 2014 novel *10:04* depicts hurricane Irene barreling towards and striking New York City in August 2011. As awareness of the storm's impending arrival sets in, it begins to feel like a snow day, says the narrator, "when time was emancipated from institutions, [… and] each glittering ice particle an instant gifted back from your routine." These interruptions whipping in from the atmosphere, feel like a "technology for defeating time" (18). Waiting for the storm, the city seemed to hold "one common conversation" that elided conventional social partitions (17).

Walking through the empty aisles of Whole Foods, attempting to scrounge together a last-minute survival kit, Lerner's narrator comes across a plastic container of instant coffee. It seems to glow in his hands -- as planes are grounded and highways closed, the social relations of production, and the processes and distances that connect growers, roasters, packagers and re-packagers, shippers and drivers, are no longer invisible. The commodity form recedes from the product, revealing the living labor within it. "The majesty and murderous stupidity of that organization of time and space and fuel and labor [became] visible in the commodity" (19). The disaster unveils all that the fetish has concealed: *to unveil* is the meaning of *apocalypse* (Derrida 1984b).

Interrupted by Irene, suddenly distanced from the repetition of its everyday routine, the city sees its chance to rewrite its future: "As the eye drew near, what normally felt like the only possible world became one among many, its meaning everywhere up for grabs, however briefly" (24).

It is a vain and perverse hope that some violence from the sky will wipe things away and permit a new beginning. The suspension of clock time, ringing you due -- the snow day -

- calls into question the usual way of things, and even demonstrates glimmers of how it could be otherwise. But the ritual continues, and the glow of the liberated commodity is "retrospectively erased" (24). "[My neighbor] only seemed to acknowledge my presence when our world was threatening to end" (213).

What is it that carries the ritual through the disaster, even as it's interrupted?

3. An Ideal Subject for Insurance

Though immune to structural precaution, flash floods are also an "ideal subject for insurance." The only way to protect your property from a flood is to build on the hillside. Thus, "no other prevention measure against the natural hazard is as cost-efficient as an insurance policy" (Munich Re 2016, 40). What a powerful way to combat nature -- abstracting the value out of the material world and holding it safe as a promise in London.

The future is held safe as so many promises.

VI. Unreal City

> "Architecture, fashion -- yes, even the weather -- are, in the interior of the collective, what the sensoria of organs, the feeling of sickness or health, are inside the individual. And so long as they preserve this unconscious, amorphous dream configuration, they are as much natural processes as digestion, breath, and the like. They stand in the cycle of the eternally selfsame, until the collective seizes upon them in politics and history emerges."
>
> Walter Benjamin, *Arcades Project* (390, [K1,5])

Here we are again, moving through long-dug channels, following the solemn flows of the undead, packed into the London Underground. At Bank Station, we sleepwalk up the stairs into a sea of ultramarine suits. The City of London unfolds like a dream, like a commodity on display, shrouded in myth, its surfaces dotted with fetishes. "When newness [becomes] a fetish, history itself [becomes] a manifestation of the commodity form" (Buck-Morss 1989, 82). History is alienated from its own production. We are running late: we can't see around the mirrors holding the image up. The interior of the collective is unconsciously invested[5]

London is the center of the world. In a regular working day, London can communicate with Asian financial centers in the morning, and American financial centers in the afternoon -- it is the nerve center of global finance (Norfield, 37).

Populating the Unreal City, we have, first, the Office of Time -- the Bank of England. The Office of Time governs the rate of interest: the price of future. It is the logic of

accumulation writ large in stone, the headwaters and home of the flows of debt that demand infinite and increasing growth. This is a temporality of investment and return. Finance is the art of making use, in the present, of future value. It is an art of immediacy -- of spending ahead of time and demanding, every morning, a return across the bridge, to make up for what is already long gone. It peals its demands, writing and ringing them in clock-time, dead.

Second is a minor character for now, but whose ethos spills into everything: the Office of Fluctuations, the Turbulence Exchange -- the London Stock Exchange. This is the site of forecasts and tides, the rhythms of prices, rising and falling, of profit-making motion. Every trader is an ad hoc meteorologist, reading the ticker-tape skies. Finance "generates an atmospherics," says Melinda Cooper (2010, 180).

Lastly, and the primary subject of this paper -- the Office of Accidents: specifically, global reinsurers. Reinsurance is an immensely concentrated industry: the top ten largest firms underwrite 72% of all reinsurance premiums in 2015 (A.M. Best 2016, 7). Swiss Reinsurance, the second largest global reinsurer, takes a prominent place in the landscape of London: a spiraling tower of steel and glass that by the end of this paper will be picked apart. The shape of insurance, as we will see, is materialized in Lloyd's, the world's premier insurance marketplace.

Though they are each contained in their own shells of steel and stone, the functions and pre-occupations of each of these offices interpenetrate and coincide. Laid out in this "Square Mile," anchored into the landscape and already waiting when we arrive, is a schema of the forces that combine to manage global finance, and in managing global finance, influence the world's time, its chance, and its preservation. Capital advances with a mind to bringing about its own forecast: it spends ahead of time. The future comes pre-accomplished.

VII. The Office of Accidents

1. The Shape of Insurance

The Lloyd's building is the shape of insurance. It is, at its core, a big Room -- an open atrium that facilitates movement and face-to-face meetings between insurance-seekers and underwriters: an intimate market. It is a place for making promises, a sanctuary. It is designed so that those features "subject to obsolescence and deterioration" can be maintained and replaced without interrupting the "permanent and unchanging" (Powell 1994, 16) ritual of Room: that is, it is adorned by its innards -- the heating ducts, elevators, restrooms, and exit stairs all hang on the outside of the building.

From the outside, Lloyd's appears exoskeleton'd and inaccessible. Through gaps in the towers that surround it, it appears only as fragments, a presence only glimpsed, seeming to stare back at you as you walk around it, "swell[ing] and contract[ing] and chang[ing] its silhouette" (6), reflecting the electric fog of the London sky. "The almost unanalyzable image the whole building presents […] [completes the] final disguising of

the great central cube" (7). There is no way into the Room for *you* -- it is buried beneath its armored, spiraling shell.

Like the industry it serves, Lloyd's is balanced "between permanence and transformation" (44). Its job is to hold everything together, through all the different ways things can be torn apart. The Office of Accidents is open on one side to chaos -- but it promises to carry you through it.

2. Insurance and Nature

> "Behold, I will cause it to rain tomorrow at this same time, an exceeding great hail: such as hath not been in Egypt from the day that it was founded until this present time." (Exodus 9:18)

Insurance marks a particular intervention in the events of fate, and a particular departure from the long-term historical relationship between social arrangements and natural extremes. As the ninth century priest Agobard of Lyons says, "Anything that occurs in the sky is attributed to the command of God." Agobard's insistence on making a sermon of the storm has more immediate political ends, however: he's worried about the "wretched men" who are claiming to be able to guard crops against storms, and demanding to be paid tribute for their services. Less pressing, but still of concern, are those "storm raisers" able to summon and pinpointedly direct hail to fall on their enemies' fields. No, says Agobard, the skies are the work of God. There is an immense power wrapped in turning -- or seeming to turn -- the tides of chance.

Palladius, writing in the fifth century, recommends "threaten[ing] the heavens with a bloody axe" as storms approach (cited in Oberholzner 2011, 135). Today, of course, human relationships with the weather have been "profaned," (152) and rather than bloody axes, we intervene into the vagaries of fate through insurance. Insurance needs, as its base, a de-spiritualized philosophy of nature: a mechanical and martial science.

"Between 1500 and 1700," says Carolyn Merchant, "living animate nature died, while dead inanimate money was endowed with life" (1980, 288). Mechanical philosophies of nature, ascendant in the Enlightenment, divested the natural world of its animism and magic, overturning organic assumptions about the cosmos. (193)

This split of the organic world into a nature/society binary is "complicit in the violence of modernity at its core" (2015, 4), says Jason Moore. Capitalist development is impossible without the conceptualization of an external, abstract, quantifiable nature. Abstract nature and abstract social labor are two sides of the same coin (86). If nature is "a system of dead, inert particles moved by external, rather than inherent forces," then the manipulation of nature is made legitimate (Merchant 1980, 193). As Benjamin suggests, "The description of the labor process in its relation to nature will necessarily bear the imprint of its social structure as well" (*AP* 360, [J75,2]).

Lucien Febrve suggests there is a parallel between "material safety (insurance) and spiritual safety (salvation)." The growing dominance of clock time and a culture that comes to be "dominated by quantification," lay the groundwork for a mechanism of *material salvation* -- insurance (quoted in Ceccarelli 2001, 607). "Money is the medium by which Western society seeks to protect itself from the constant threats of an otherwise unpredictable nature" (Ceccarelli, 607). Insurance intervenes into acts of fate on behalf of capital.

Money is what comes to life through the death of nature, and it is money that in turn "gives life to number" (Benjamin, *AP* 514, [O13a,3]). That is, money-quantity is *living number* -- this is a different kind of witchcraft, a different sort of animism than that driven out by mechanism. It is a far more powerful force. Money is spooky action at a distance. As the general equivalent, it stands for everything, immediately (*AP* 498, [O4a]): it makes things move.

3. A Peculiar Magic

> "Insurance protects against loss of capital […]. What is actually insured is not the particular event that causes harm […], but the capital against which the insurer offers indemnification […]. Insurance […] can provide some certainty that capital will be there to repair whatever damage can be expressed in monetary terms. This means that everything, whether person or property, is commodified for insurance purposes. Put most simply, insurance is the exchange of money for the promise of money in the future if a loss occurs. The conditions of this exchange vary"
>
> Ericson et al., *Insurance as Governance* (2003, 48)

Insurance is the world's largest economic industry (Lobo-Guerrero 2011, 1), and its product is a promise to redeem a monetary loss. Insurance does not protect against the unexpected -- unexpected for *you*, sure, the flash flood -- but insurance can only be sold against pre-defined events, with payments triggered by pre-determined conditions. The slogan of the world's largest reinsurer, Munich Re, captures this ethos exactly: "Not If, But How." The abstract qualities of the events to be involved are already determined. Frank Knight's definition of risk as a "*measurable* uncertainty" (1921, 20), is useful here: it is the quantitative logic of insurance that allows the exposure to loss from storms and earthquakes to be abstracted and turned into a commodity. Risks must be created, and they are created through quantitative assessments of value set against the probability of loss.

At its base, insurance is grounded by a speculative logic. A speculator is concerned only in being able to foresee fluctuations when reading the skies. The insurer gains by guessing the correct numbers. "The number is everything; the thing itself is nothing.

The number alone is real" (Hilferding 1981, 149). Benjamin suggests that "the wager is a means of conferring shock-value on events," loosing them from their contexts (*AP* 513, [O13,5]). The world becomes so many tumbling die: nature becomes a machine for generating measurements and events for writing contingent contracts.

Private insurance operates on a strict model of inclusion and exclusion -- sorting people and property into risk pools, while excluding outright people and places deemed "too unremunerative" (Johnson 2015, 14). "The person who pays a premium acquires a right of indemnity" (Ewald 1991, 209). Munich Re promises to save you from damnation. Those excluded are condemned.

If you've ritually paid for your indulgence, then even as your property falls apart, the Office of Accidents keeps its value intact -- it preserves this value as a quantity, which it returns to you as *living number*. Here, insurance performs its "peculiar ontological 'magic' -- 'set[ting] the money form of value free from the life of things'" (Johnson 2011, 189, quoting Baucom 2005). Insurers play the landscape like a game board, *assessing* quantities, determining where the money-form of value can be set free and redeemed, and where it remains moored to material, to be drowned along with it. In this sense, property insurers have an outsized role in directing the distribution of wastedness across the landscape, defining where processes of becoming-wasted are salvaged, and where ruin is total.

"Rich countries can afford disasters" (Munich Re 2016, 10). Rich people can too. Only 27% of losses inflicted by Hurricane Harvey are expected to be insured (Basak 2017). The Office of Accidents is a private god, redeeming for profit, indemning and condemning, producing the *insurance gap*. When the disaster strikes, this gap *ossifies* social relations. In promising the preservation of select capitals, pledging quick liquidity in times of crisis, insurance carries the ritual of capital through contingent events. The process of remuneration, the *payback of the purchased promise*, retroactively valorizes the premiums paid for the present salvation. Insurance relations are personal, long-term, and built on trust: they are performed again and again in the ritual of the Room[6] -- but this is a ritual that mostly bars and shuns.

VIII. Catastrophic Reinsurance

1. Reinsurance and Scale

Floods in Thailand in 2011 were the most disastrous in a lifetime. Hundreds of thousands of homes were flooded, a quarter of the country's harvest was lost, and seven large industrial parks, collectively employing half a million people, were inundated by over a meter of water, shutting down a major hub of global manufacturing and incurring the largest-ever insurance losses from an inland flood (Munich Re 2012, 27-31)

In the course of the disaster, one of the primary evacuation centers in the affected region itself flooded, prompting an evacuation of the evacuation center (29). In this detail, we see a precise illustration of the function of reinsurance. Reinsurers sell insurance to

primary insurers; if a particularly expensive event threatens the primary insurer's solvency, reinsurers provide capital to ensure that promised payments are made. Reinsurers serve as a global-scale backup evacuation center. With a risk pool drawn from all over the world, reinsurers can absorb shocks that overwhelm primary insurers, "smoothing out the effects of purely local fluctuations" (Kopf 1929, 32), widely distributing risk and holding the insurance system together. As Strum and Oh (2010) demonstrate, this ability to jump across scale means that resilience is built in (155). As you evacuate the evacuation center, you climb into a bigger basin, with a wider and deeper risk pool.

Standing at the end of loss claims, carrying capital through catastrophe, I argue that reinsurers are among the most counter-revolutionary forces you can find. They are capital's strongholds; mountains of safety.

2. Flummoxing the Chronicler

> The disaster is the "intense suddenness of the outside." It "does not have the ultimate for a limit: *it bears the ultimate away*."
>
> Maurice Blanchot, *The Writing of the Disaster* (1995, 4; 28)

Of the Viking invasions Marc Bloch tells us that "the monk of Saint-Germain-des-Pres, writing very soon after the event, related how the ships of the Northmen sailed up the Seine in 854. Notice the agitated tone in which he observes that 'one had never heard speak of such a thing or read anything like it in the books'" (Bloch 1961, 55). *Notice the agitated tone*. No one told us that men in strange boats with long swords would come sailing up the river, then charge at us to murder us and take all we own! The books said nothing. Our monk was likely relying on a historical list that looked something like this:

709. Hard winter. Duke Gottfried died.
710. Hard year and deficient crops.
711.
712. Flood everywhere.
713.
714. Pippin, Mayor of the Palace, died.
715. 716. 717.
718. Charles devastated the Saxon with great destruction.
719.
720. Charles fought against the Saxons.
721. Theudo drove the Saracens out of Aquitaine.
722. Great crops (cited in White 1980, 11).

The chronicle is useful in setting the bounds of possibility and demonstrating the regularity of events through time. *Notice the agitated tone* -- the Viking invasions, then,

are an intensification of extremes -- an outlier on the normal curve of the silent year, outside the periodicity of the chronicle.

It seems today we are more and more regularly flummoxing the chronicler. During Hurricane Harvey, the National Weather Service tweeted, "This event is unprecedented & all impacts are unknown & beyond anything experienced."[7]

How do you prepare for something that's never happened before?

3. The Politics of Possibility

As we've seen, the Office of Accidents is opened on one side to chaos -- its solvency, its theological function, lies at the whim of the outlier. The EU's Solvency II regulations say that insurers must keep enough reserves to cover a 1-in-200-year event.

The Fukushima earthquake of March 2011 was a 1-in-5,000-year event -- the ultimate outlier -- so improbable that it often makes better sense for insurers to ignore it. 1-in-5,000 is a periodicity that the chronicle fails to capture. Models predicted this particular fault might produce an 8.3 magnitude earthquake -- the 9.0 that registered was believed to be outside the realm of possibility. "This is totally different from anything we have ever experienced," said Munich Re (2012, 1). The Fukushima disaster was the most expensive natural disaster in history by almost double, and yet, the global reinsurance industry successfully absorbed the blow, even if the irradiated countryside didn't.

Insurance has traditionally operated on a probabilistic approach, using statistical regularities of past events to define the risks of the future. Today, for our flummoxed chroniclers, actuarial-statistical ways of knowing break down and the probable yields to the possible. This is captured most succinctly by insurance consultant Charles Scawthorn: "How do we make the unforeseeable foreseen? We have to use our imaginations" (Munich Re 2012, 18).

Melinda Cooper (2010) draws attention to this shift in anticipatory ways of knowing when she names "scenario planning" as the "most consequential of epistemologies in contemporary politics" (171). Scenario planning makes the future "present" (Anderson 2010) by imaginatively "embodying" and enacting a future "what if?" (Cooper 2010, 171). Scenario planners think "mythologically," says Anna Zalik (2009, 563), and the products of their imagination have world-shaping effects.

The anticipatory imagination of security is governed by a "philosophy of precaution," in which suspicion, fear, and mistrust dominate decision-making (Ewald 2002). This logic flourishes in "conditions of declared constant emergency" (Amoore 2013, 12). Catastrophe modelers have stopped using past data to plot the future, and are turning instead to "expert elicitation panels." The worst imaginable case haunts their creation of risks, and demands more tribute to stand before the storm. Risk Management Solutions first used possibilistic modeling in 2006, which resulted in a premium increase of 20-40%. A 2011 update increased estimated losses by 30-110% (Johnson 2015). There is

always a human deciding on the plausibility of a modeled outcome (Fine 2007), "setting the gauge" of the new normal (Amoore 2011, 31). Models are constantly tweaked to fit human desires (Gillespie 2014).

Climate change poses a real and dire long-term threat to the insurance industry. But due to the annual cyclicality of reinsurance pricing, the risks of long-term climate change are largely irrelevant in the short-term. In fact, the "prodigious supply of new uncertainties" (Johnson 2015, 10) brought on by climate change, and their incorporation into price-setting models, has been a boon to business: the industry is able to turn long-term fears into short-term profits. Insurers are confronted by an "inexhaustible market" for climate risks (Johnson 2011, 187).

Pooling resources to collectively manage risk is a vital social technology, and how we organize and construct our risk pools is eminently political. The way we imagine and distribute the future's burdens leads to the preservation of some values over others. It has never been more urgent: how can we create long-term hedges that preserve a more caring set of values? How do we make it out of here alive?

4. The Apocalyptic Imagination

Apocalypse abounds. It is "sung from the rooftops even by the sparrows" (Enzensberger 1978, 75). "The apocalyptic tone of imminent environmental doom suffuses virtually every aspect of daily life, present and future," said Neil Smith in 2008 (245). A decade on and the hall keeps filling up with horrors. These catastrophic visions have "depoliticizing and disenchanting effects" (de Goede and Randalls 2009, 867) which form an "integral and vital part of the new cultural politics of capitalism" (Swyngedouw 2010, 219).

Cindi Katz (1995) says that these narratives foreground a "a politics of hopelessness" (277), in which we are more akin to "spectators" or "witnesses" (Sturken 2001) than political subjects. Apocalyptic politics are nothing new: the effects of the story of environmental doom resemble those of nuclear war. There is a similar kind of "uncanny." Joseph Masco (2006) calls the "nuclear uncanny" the "perceptual space caught between apocalyptic expectation and sensory fulfillment" (28) -- the missiles may have always already been launched; invisible radiation may already be creeping into your bones.

Climate change is a different sort of disaster, looming imprecisely. In our atmospheric uncanny, we know that it is too late to stop the fires and the floods -- the end of the world has already happened, the fault has slipped, even if the foretold flood has hardly begun.

The chance of nuclear disaster has never gone away. But climate change is MAD again; the skies have increased their stake in the balance of terror. Each apocalypse is a totalizing vision, but their respective uncannies occupy vastly difference temporal scales. Together they represent "the dangers of the millisecond and the […] millennium" (Masco 2006, 14). We are staring at our shoes, wondering what we're supposed to do, walking

again and again across the bridge.

One thing for certain is that the apocalypse will be differentially experienced along classed, racialized, gendered, and place-based lines; already disasters make the vulnerable more vulnerable. "Doom is no longer a leveler" (Enzensberger 75). Wastedness is consciously distributed across the landscape as only some values are deemed worthy of salvage. These are powerful decisions, the ritual renewal of which we inherit everyday, already encoded in steel and bricks. Capital already has its ticket through, and we are already fated to drown.

5. Catastrophe Portraits

> "The chronicle […] lacks a temporal perspective. […] The characters in a medieval chronicle are seen against a transfigured time which can rudely interrupt their actions. The Kingdom of God comes upon them as a catastrophe."
>
> Walter Benjamin, "A Chronicle of Germany's Unemployed" (1938d, 130)

Here we enter into the apocalyptic imaginary of the industry tasked with holding it at all together, to find, unsurprisingly, the spirit of the chronicler alive and well, tracing the bounds of intensified extremes. Munich Re's *TOPICS Geo* is just such an investigation into the unprecedented, providing an annual overview of the previous year's performance in insuring natural disasters (Munich Re 2012, 2013, 2014, 2015, 2016, 2017). Close-up "Portraits" of particularly destructive events make up a bulk of the publication, together with galleries of excess: images of toppled houses on toppled hills, heaving oceans, submerged cities, fractured Earth, odd avalanches, surges, overflows, piles and floods. Statistics of each event follow the same pattern: overall losses ($), insured losses ($), fatalities. Forces rip things apart and insurance preserves a living number.

Swiss Re reimagines historical events in the present, seeking "Messages from Forgotten Catastrophes" (Swiss Re 2014a, 2014b, 2015a, 2015b). In a re-envisioning of the 1868 Hayward Earthquake, Risk Management Solutions imagines from every epicenter the destruction of East Bay, California today (RMS 2007, 2013). Risk modeler AIR publishes a quarterly report dramatizing the 1-in-100 year "Megadisasters" generated by its models, ominously asking, "Are You Prepared?" (2015, 2016). Leigh Johnson says that the reinsurance industry's "invocations of immediate [climate] emergency" allows "the risk industry… [to] reproduce the conditions for its own existence" (2011 199) -- as Louise Amoore suggests, it is this state of constant emergency that gives way to politics of possibility, enrolling fear in the generation of short-term profits.

Industry discourse creates "a new public narrative and imaginary" (Bridge and Wood 2010, 566) about catastrophic insurance, in which there is conceivably no limit to the modeling, abstraction, and commodification of risk. For a price, anything is insurable. We see echoes here of the optimism that accompanied the early modern popularization of

the insurance form, epitomized by Daniel Defoe: "All the Disasters of the World might be prevented. All the Contingencies of Life might be fenc'd against […], Floods by Land, Storms by Sea, Losses of all Sorts, [even] Death itself, by making it up to the survivor" (1697, 123). This sense of limitlessness is heightened by the development of the catastrophe bond.

6. The Catastrophe Bond

In the same way that reinsurance is a shock-absorber for primary insurers, the reinsurance industry is increasingly turning to *capital markets* as an evacuation center of their own. The development of exotic financial products, grouped under the heading of "alternative capital" and exemplified by the "catastrophe bond," turns hazard risk into an asset class that allows investors to selectively take on the tail-end risks of place-bound vulnerabilities. Catastrophe bonds are sold to cover "peak perils," like Florida hurricanes or California earthquakes. Reinsurers hold investors' capital over the short-term duration of the contract. In the event that a disaster exceeds a pre-determined loss threshold, the investors' capital is used to cover costs remuneration. If there is no excessively disastrous Florida storm, investors make a tidy profit. Catastrophe bonds have outperformed the S&P 500 and high-yield corporate bonds since 2009 (Johnson 2013, 2014).

Investors call this particular meeting-place of capital and risk "the convergence market," a market made possible by the breakdown in divisions between formerly autonomous types of financial institutions in the wake of the 1999 repeal of the Glass-Steagall Act. Global insurance premiums were $4.5 trillion in 2015 (Swiss Re 2016, 8). The global reinsurance market is approximately $400 billion, of which $71 billion takes the form of alternative capital, dominated by catastrophe bonds ($24 billion) and collateralized reinsurance ($40 billion). Some market participants expect this total to double over the next five years (A.M. Best 2016, 13).

Alternative capital stabilizes the reinsurance industry, enabling it to offset its tail-end risk to a bigger basin. For as long as the models that bring reinsurers' risks into being retain their human-tailored prescience, in theory, there is no limit to what may be insured. Or, at the very least, catastrophe bonds allow this story to be told.

7. The Catastrophic Fix: The Disaster is Built In

The insurance industry finds itself caught in a contradiction -- though its purpose is to preserve value, devaluation is necessary to sustain accumulation. In general, says Johnson, "the modern catastrophe reinsurance industry is characterized by recurrent crises of abundance" (2015, 4). In this sense, periodic catastrophes are *necessary* for the industry to remain profitable. Johnson calls this the "catastrophic fix" -- natural disasters wiping out overaccumulated capital and allowing for both new rounds of investment in the built environment and increased premium prices -- and profits -- for insurers.

In short, the disaster is built in. As Deleuze and Guattari suggest, antiproduction is a part

of production: “everywhere [capital] mixes antiproduction with the productive forces in the immanent reproduction of its own always widened limits” (1983, 335). Like wars, disasters absorb otherwise unrealized surplus. Peter Galison (2003) details the way that capitalist production is re-located in the wake of the development of the atomic bomb: the shape of the distributed, decentered logic of transnational capital is *built* to withstand explosions and storms. Capital is at the very edge of the explosion.

What does this mean? It means the storm will not stop time, as Ben Lerner vainly suggests. *The storm keeps things going* -- the catastrophe is a necessary fixture of political economy. The flood is accounted for. Insurance holds things together as they threaten to fall apart, and nothing really changes.

8. Capital’s Natural Death

> “The experience of our generation: that capitalism will not die a natural death.”
>
> Walter Benjamin, *Arcades Project* (1999, 667, [X11a,3])

We won’t see it either, but there must be a limit. The Earth will burn its parasites, and flood its fumigators -- someday it will really finally break. Someday capital will die a natural death, as the Earth rages wild against its poisoners. Until then, capitalism feeds on its own disaster. It will enforce the last word as it drowns with the rest of us. Benjamin wants to wipe historical materialism clean of teleology. But our end is already written in the atmosphere, invisibly.

IX. Novelty and Violence

1. Wrenching the New

> “Novelty and creativity exist because of -- not in spite of -- the fragility of existence. […] Precisely what makes catastrophe possible is also what makes creative evolution possible […]. This is as true for the innovation of the eye as it is for the possibility of a worldwide general strike. […] Interpenetrating open systems from microbe to cosmos have to be capable of catastrophe -- that is[, they must be] *not self-correcting* -- if something like real creativity is to exist.”
>
> Jairus Grove, “Of an Apocalyptic Tone Recently Adopted in Everything” (2015)

As Jairus Grove suggests, there is an inseparable connection between creativity and catastrophe. Systems do not self-correct -- they are always out of equilibrium, even if they’re always *tending*. Usually they are held together, but sometimes they fall apart:

fractures and storms. The thesis advanced here is that creativity *is* catastrophe. The question that follows is how to make a politics or an ethics of the future that understands creativity as catastrophic. In this paper, I've tried to show one of the forces that enables the generations-long processes of capital accumulation to continue, in its variety of costumes, against all bombardments.

But what can we do about our future, which has already long-since slipped away? Can we *swerve* our way into a new, long-term arrangement of power that values care over exploitation and uplifts the heretofore disinherited? Must there be some kind of break?

Georges Sorel (1999) suggests that the passage from capitalism to socialism will be "a catastrophe whose development defies description" (140). In this section, we will investigate Georges Sorel and Benjamin's writings on violence -- and question whether a violence which opposes, and aims to eliminate, an imposed and oppressive social order indeed "constitutes the principle subject of history" (167). We must paint a monster, a new angel, wrenching *true novelty* from the permanent disaster of the Same, snatching humanity at "at the last moment from the catastrophe looming at every turn." (Benjamin, *AP* 339, [J61a,3]).

2. Critique of Violence

Benjamin's "Critique of Violence" (1921a) seems to consume itself as it proceeds: "before your eyes a demonstration ruins the distinctions it proposes," says Derrida in his reading of the essay (1992, 43). The primary theoretical aim of the essay is to move away from a critique of violence as framed by traditional legal theory, which analyzes and justifies violence in terms of means and ends. Benjamin proposes instead critiquing violence as a "manifestation" of immanent bodily forces, of which he names two: "mythic violence," a law-making and law-preserving force, and "divine violence," a law-destroying one. It is this distinction that ultimately collapses into itself, but there are important lessons to learn from its inherent instability.

3. Sorel's Reflections on Violence

Before following Benjamin's critique, it will be useful to draw on the work of Georges Sorel, which guides Benjamin's essay. Writing in 1908, Sorel distinguishes between a "general political strike" and a "general proletarian strike." The first attempts to *change* the state. Strikers seek concessions, and modifications to the existing state of things. In this, says Benjamin, it is violent: it attempts to *make a new law*. The proletarian general strike, on the other hand, does not seek concessions, but rather a total social transformation -- this an upheaval that it "not so much causes as consummates" (Benjamin 1921a, 246): the new order brings itself into being by ending the everyday routine of the old order. In this sense, "destroying state power" is *nonviolent*: if the general political strike is law-making, the general proletarian strike is law-destroying. It brings a new state of the world into being wholesale. No matter how catastrophic the end of the old world is, "no objection can stand that seeks […] to brand such a general strike as violent" (246).

Sorel suggests that the atrocities committed in this catastrophic break, inherently non-violent as they are, will be little more than a footnote -- the just order that is founded, which replaces oppressive relations, will legitimate and excuse its founding acts. But to clear away the law is necessarily to found a new succession, and begin a new inheritance. The justness of the law depends on its yet-to-come; the law produces the interpretive models that will legitimate and name its founding violence. We will return to this paradox of iterability, in which the conditions which preserve a law are laid in its foundation: iteration is inscribed in the original (Derrida 1992).

4. Mythic Violence

Legal violence has two functions -- law-making and law-preserving. These functions are embodied in the police, where this distinction dissolves as it fuses together into *embodied power*. "Its power is formless, like its nowhere-tangible, all-pervasive, ghostly presence in the life of civilized states" (243). It exists in the atmosphere, as potential, but already-sanctioned use of force.

Benjamin calls this violence, with power-making as its principle, "mythic violence." To illustrate mythic violence, Benjamin turns to the ancient Greek legend of Niobe. Niobe, a mortal, boasted that her seven sons and seven daughters far exceeded the beauty of the twin children of the Titan, Leto, the gods Apollo and Artemis. Niobe's hubris stirs the wrath of the two gods, who murder all fourteen of Niobe's children in retribution. In this case, the violence of the gods is not a means to an end -- something *willed* -- but primarily a manifestation of the gods' existence (248). It might appear that the actions of these gods is a punishment, "but their violence *establishes* a law far more than it punishes the infringement of a law that already exists" (248).

This flow of force is remembered: it is a flood carving a channel. It materially encodes the law: Niobe, in her mourning, turns to stone. But the law doesn't mean anything until it is enacted, body on body. In this sense, power-making violence, in its every iteration, repeats its originary act, perpetually re-establishing the law and carving the channel of the relation ever deeper. The law is that which makes power move one way or the other in a pre-existing relation *from the beginning*, before bodies enter the scene: relations preceding relata. Law-making and law-preserving collapse into a fused, bodily "manifestation." Preserving the law means making it anew: to maintain law, police must constantly *re*-found it, renewing the ritual, maintaining the law, re-digging the channel.

5. Divine Violence

Justice cannot be generalized -- it is possible only in the individual case. As such, it cannot be captured within the ends of a law, as suggested by the traditional legal theory that Benjamin critiques. Ultimately, if power is the principle of all mythic law-making, then justice *must* destroy the law (1931b, 456):

> "This very task of destruction poses […] the question of a pure immediate violence that might be able to call a halt to mythic violence. Just as in all spheres God opposes myth, mythic violence is confronted by the divine. And the latter constitutes its antithesis in all respects. If mythic violence is lawmaking, divine violence is law-destroying; if the former sets boundaries, the latter boundlessly destroys them; if mythic violence brings at once guilt and retribution, divine power only expiates; if the former threatens, the latter strikes; if the former is bloody, the latter is lethal without spilling blood" (1921a, 249)

If the law is a channel, an inherited flow of force: we must end the inheritance -- break, swerve. But how? This curious passage almost seems to inspire an antimonian ethics -- a sort of justification by faith -- with its convocation of pure immediacy, what Sigrid Weigel describes as an "explosive charge-become-flesh" (Weigel 19). We must cautiously interrogate the example Benjamin uses to illustrate this kind of violence, as it perhaps illustrates the catastrophe of the general proletarian strike. Opposing the mythic violence of Apollo and Artemis is the divine violence of God in the Korah Incident, described in Numbers 16-17. Here, a group of 250 insurgents led by a Levite named Korah challenge Moses' leadership on matters of settlement policy in the conquest of Canaan. Moses calls upon God to put down the insurrection, and God promptly answers:

> "31. Just as [Moses] finished speaking these words, the earth beneath them split open. 32. The earth opened its mouth and swallowed them up, and their families, and all personnel who belonged to Korah, and their possessions. 33. They, and all associated with them, descended live into Sheol. The earth closed over them, so that they vanished from the midst of the congregation." (Numbers 16: 31-33; Levine 1993, 403-432.)

Benjamin's distinction between a law-making and a law-destroying violence is that divine violence *expiates* -- it wipes away the trace of any wrong-doing: Korah, and all he owns *vanishes*[8]. The violence, then, is bloodless: for Benjamin, blood is the crucial element. Blood has a weight -- it is a unit of measure, the ambiguous "price" of retribution. Blood perpetuates cycles of vengeance. Retribution may "remain in force for centuries without dilution" (1921b, 286), perpetually renewing itself, forever matching blood with blood. Divine violence ends the cycle of retaliation: in its bloodlessness, it does not permit the possibility of revenge. In this it is a total, and apocalyptic violence. It expropriates the expropriators, justly[9].

6. The Paradox of Iterability

> "The Kingdom of God is not the telos of the historical dynamic; it cannot be established as a goal. From the standpoint of history, it is not the goal but the terminus."
>
> Walter Benjamin, "Theological-Political Fragment" (1938a)

It is here that the distinctions between mythic and divine violence break down: one cannot bring about the Kingdom of God -- it is impossible as a goal. Iteration is always inscribed in the original: a flow creates a channel, which guides future flows. Law-destruction, in the sense of a general proletarian strike -- breaking and swerving away from state power -- itself is a law-making violence. Violence is only ever immediately possible as mythic. The interpretation of the law *comes with* the violence that founds it: if "divine," it is only because it insists there is no need for revenge. Had the Israelites not prevailed, the power-making behind the violence of the Korah incident would be revealed.

All violence lays the conditions for its own repeatability. Repeatability, of course, is not guaranteed. The channel can be fractured and swerve off in a new direction: a new ritual. But as we've seen, capital perpetually celebrates itself in advance. As Deleuze (1994) suggests, this is the "paradox of festivals: they repeat the 'unrepeatable.' They do not add a second and a third time to the first, but carry the first time to the 'nth' power. […] It is not Federation Day which commemorates or represents the fall of the Bastille, but the fall of the Bastille which celebrates and repeats in advance all the Federation Days" (1).

In the perpetual feast day of capital, these celebrations consist in the embodied rituals of the everyday, with police, or men, or capitalists, perpetually re-making and so continuously re-founding the existing order. In every act, they ring in the future, repeating in advance. The traps are set: we are already mapped.

7. To Interrupt the Course of the World

> "Marx says that revolutions are the locomotive of world history. But perhaps it is quite otherwise. Perhaps revolutions are an attempt by the passengers on this train -- namely, the human race -- to activate the emergency break."
>
> Walter Benjamin, "Paralipomena to 'On the Concept of History'" (1940b, 402)

How do we end our awful inheritance? How do we break something celebrated in advance, already-preserved through disaster? The most we can do forestall the coming catastrophe is to *get in the way*. "For those who have never stood in the way and who do not count, the future contains nothing important -- except the decision to put themselves in the way and make themselves matter. […] Those who will stand firmest in this cause are those who started by letting themselves fall." (1939b, 231). As Sara Ahmed says, "The history of disobedience is a history of those who are willing to be ruined" (2014, 137).

"What characterizes revolutionary classes at their moment of action is the awareness that they are about to make the continuum of history explode," says Benjamin (1940a, 395).

To interrupt the course of the world is to become a continuously ringing alarm (Benjamin 1929), destroying the homogenous and empty time dolled out by the clock -- *filling it with the "now*."

This may mean expropriating the expropriators, and firing on the clocks -- or, revolutionary praxis may have a gentler face. "What is hard must yield," says Benjamin, if we "make common cause with whatever is unobtrusive and plain but relentless, like water." Water, as it moves, "vanquishes in time the mighty stone." (1939b, 247). Here again the figure of the flood, but from an atmosphere of kindness. "Anyone who wishes to see hardness yield should not let slip any opportunity for displaying friendliness" (1939b, 247).

To interrupt the course of the world is to cancel the demands pealed out by the clock for the Office of Time; it is to rework the Office of Accidents for a different set of salvage. It is to stop, and swerve, and celebrate something else ahead of time: a new ritual, a new calendar, a new time.

X. Methods Fit for the End of the World

How do we do this? It is a question of weapons and tools, which is to say, it is fundamentally a question of method: "How we spend our days is, of course, how we spend our lives," says Annie Dillard (1989, 32). Method is the ritual that underwrites our faith in knowledge. Ours must be the faith that, though we are not going to redeem the past, today, we will leave behind weapons and tools that one day will.

Weapons and tools: though one destroys people, and the other produces goods, the distinction between them can be blurry. A shovel is a tool for moving Earth, but it could also be swung at your landlord's head, and if sharpened could decapitate him.

The weapon depends on speed -- speed to travel across distance, speed to pierce. It is ballistic, projected -- its essence is propulsion. But if the weapon seems to have a life of its own, operating as speed itself, then the tool is *moved*. If the weapon escapes gravity, the tool harnesses it. The tool is of the order of work, which meets resistances and overcomes them: the Earth resists being tilled, but is turned. On account of overcoming these resistances, work *spends*, and must be renewed, re-readied. Work is a metabolism; it needs an infrastructure to reproduce it.

The tool needs something *behind* it, pushing -- heaving against the Earth, swinging the hammer. Tools are the everyday process of breaking resistances. Perhaps we can say that the tool is the ritual itself. Weapons are what takes flight -- what comes across the divide and sticks: a prayer, a catchy tune. We will flood the world with each of these: there can never be enough[10].

We hope that the weapons and tools we produce today will be transformed, modified, and used in unexpected ways. How can we build this flexibility in as a feature, and leave openings for radical revisions and repurposing? Forging a world in which "the act [is]

kin to the dream" (*AP* 360, [J75,2]) is necessarily a multi-generational project. It's vital that it be able to careen and restart, but how do we keep it going?

Knowledge is *brittle* -- our scholarship must move beyond its vain dream of the production of "knowledge." Instead, scholarship should aim for useful, working understandings that are fluid, adaptable, infinitely employable, and transferable. We need to be telling stories[11].

XI. The End

1. The Apocalypse Has Already Happened

It is *the end*. It has already happened, we already know this. The more distantly we look into the past, the further we trace it: subterranean faults slipping across the bowels of history, sending everything shaking. The surface is still without a crack. The everyday rises and falls to the shape of deep and invisible catastrophes -- we are certain it will split.

If there is no future, if the world that we've inherited is ruined, then what should we do? If we give ourselves over to the fact that we've already lost, so there's nothing to lose, what happens? If there is no future, we never happened[12]. There will be no evidence: we must open ourselves up. We must become-explosive. As Susan Sontag (1966) suggests, there are "peculiar beauties to be found in wreaking havoc" (213).

2. The Last Judgment

I don clandestine and revolutionary garb, duck beneath swinging cranes, into the Tube, and out under Trafalgar Square. There I am, behind the National Portrait Gallery, through the deliveries door, sliding between the door and its jamb, silently up the stairs holding my breath, and in, along its halls. Tudors, Stuarts, Victorians. All these ugly white men sucking the wealth of the world into this pole, stealing it away -- countenances of greed and terror -- unscrupulous and mongrel-jowled. History is the interminable passage of these persons over the carcasses of the global anonymous and sucked-dry. To play these faces on a film strip, one after another, too fast to be individually distinguishable -- what hangs there as the ghostly, floating, flickering face?

Summary justice: there I am, slashing canvases -- making the Last Judgment -- sledge-hammer swings and hatchet strikes, pummeling the shriveling canvases to dust, setting fire to frames. Interrupting this procession of victors, ringing in an anonymous history.

3. Un-welding the City

Back into the streets, through the understory of the looming city: in the alleys between watchtowers, castles, the inaccessible chambers of princes. Could a city, keeping this shape, be made gentle? Could I be anything other than *prey* here? A gentle city couldn't be so tall.

We must quarry all the structure out of this built environment. Ours must be a politics of *leveling*, and we must really mean this -- we must flatten the structures of capital: we must pull apart the webbed concentration of steel, glass, verticality, and power. We must unweld these things. We unfasten the steel and glass of 30 St. Mary Axe to make a greenhouse in every garden. Brick by brick we remake a whole new space.

4. Into the Middle

We come in through the Tube, to Bank Station. We emerge up paths well-worn by the marching dead, into the dirty hanging fog of London, Unreal City. We have our grappling hooks -- we pour along the flanks of the Bank, down Lombard -- a wrong turn -- then through the alley, exchanging glances. We are surrounded on all sides by ghosts demanding returns. We haunt through Leadenhall into the shadow of Lloyd's.

Lloyd's -- we launch away with our hooks and latch onto the many outer edges of its hard metallic shell -- we hoist ourselves up the walls and slip in through the service doors, into the heart, the belly full of names, into the holy nave of unrecorded conversations, the ritual of the Room -- we pass into Lloyd's, into the node of this wild network, grinning, in and underneath its armor plates, between, into the inaccessible middle, my compatriots and I.

XII. Notes

[1] Citations from Walter Benjamin's *Arcades Project* (1999) will be abbreviated with "*AP*." The fragments that make up the *Arcades Project* are ordered into thematic convolutes (indicated by letters), and numbered according to page number and location within Benjamin's hand-written manuscript. Citations from Benjamin's essays and other fragments are dated by their original composition or publication.

[2] I am borrowing the idea of pre-accomplished violence from Deleuze and Guattari (1987), 447-8. "State violence […] is a violence that posits itself as preaccomplished, even though it is reactivated everyday."

[3] Many questions appear throughout this paper, and most of them go unanswered. Indeed, the questions that have driven me in this project are for the most part unanswerable. Carolyn Merchant poses three questions, that have inspired my own. Hers are:

> 1. Of what is the world composed and how does change occur? (The ontological question)
> 2. How do we know? (The epistemological question)
> 3. How should we act? (The ethical question) (2016, 23)

I ask, mirroring ontological, epistemological, and ethical concerns:

> 1. Under conditions of continual becoming, what is it that persists and how? (A question of power)
> 2. How do we describe or capture complexity? (A question of turbulence)
> 3. What should we do about our future? (A question of violence)

[4] This image is adapted from Benjamin (1940a) and (1938c).

[5] Desire as a productive, unconscious investment is a central thesis in Deleuze and Guattari (1983). Desire produces the social, "hallucinating all history, reproducing in delirium entire civilizations, races, and continents, and intensely 'feeling' the becoming of the world" (98).

[6] The ritual retroactively posits its preconditions; or, alternatively, assumes its end from the beginning. This kind of economic performativity is detailed in MacKenzie (2006) and LiPuma (2016).

[7] Tweet from @NWS, Aug. 27, 2017, 11:44 AM.

[8] To unbloody violence, it must be *forgiveness* that "comes out to meet" every misdeed, not vengeance. This forgiveness is a "tempestuous storm" that obliterates the traces of the evildoer's misdeeds, a "purifying hurricane" that "sweeps away everything that would

be consumed forever in the lightning bolts" of the Last Judgment (Benjamin 1921b, 286-7).

[9] In a particularly telling moment, as regards his thoughts on violence, Benjamin says that "The attitude toward the Jews that is artificially elicited by [Nazi] rulers is precisely the one that would have been adopted naturally by the oppressed toward the rulers." This is why Nazism needs anti-Semitism: "it needs it as a parody. […] Hitler wants the Jew to be treated as the great exploiter ought to have been treated." Hitler's is, in fact, "a genuine revolutionary process," though turned on its head as a sadistic caricature, which functions to expose this model process to ridicule. (1939b, 234-5).

[10] The characteristics of "weapons and tools" are adapted from Deleuze and Guattari (1987), 395-403.

[11] These ideas are drawn from Benjamin's "The Storyteller" (1936). What is contained in the story is always something *useful* -- drawing from shared experiences, the storyteller provides *counsel*. The story gains its usefulness through its non-verifiability. This opposes it to *information*, the value of which "does not survive the moment in which it was new. It lives only at that moment. […] A story is different. It does not expend itself" (148). In this sense, the story is like a weapon. Lacking *explanation*, the story is interpreted by every listener according to their own understanding -- in this way, "it is like those seeds of grain that have lain for centuries in the airtight chambers of the pyramids and have retained their germinative power" -- it is capable of producing "astonishment and reflection" after even thousands of years (148). The story collects wisdom that can be continually reinterpreted and re-transmitted. It forges a relationship between a natural and a social world equally free of nightmares and myths.

[12] For ideas on the "ethics of the future," I am drawing on Dupuy (2013) and (2015).

XIII. References

Agamben, Giorgio (1998). *Homo Sacer: Sovereign Power and Bare Life*. Stanford, CA: Stanford University Press.

Agobard of Lyons. "On Hail and Thunder." *Internet Medieval Sourcebook*.

Ahmed, Sara (2014). *Willful Subjects*. Durham, NC: Duke University Press.

Ahmed, Sara (2017). *Living a Feminist Life*. Durham, NC: Duke University Press.

AIR Worldwide (2015). "Inland Flood Megadisaster in the United States -- Are You Prepared?" *AIR Currents*.

AIR Worldwide (2016). "Global Pandemic Megadisaster -- Are You Prepared?" *AIR Currents*.

A.M. Best (2016). "Innovation: The Race to Remain Relevant." *Best's Special Report: Global Reinsurance*. Oldwick, NJ.

Amoore, Louise (2011). "Data Derivatives: On the Emergence of a Security Risk Calculus for Our Times." *Theory, Culture & Society* 28(6): 24-43.

Amoore, Louise (2013). *The Politics of Possibility: Risk and Security Beyond Probability*. Durham, NC: Duke University Press.

Anderson, Ben (2010). "Preemption, precaution, preparedness: Anticipatory action and future geographies," *Progress in Human Geography* 34(6): 777-798.

Barad, Karen (2007). *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham, NC: Duke University Press.

Basak, Sonali (2017). "Harvey Costs Seen at Catastrophic Levels With Many Uninsured." *Bloomberg*. August 27, 2017. Online.

Baucom, Ian (2005). *Specters of the Atlantic: Finance Capital, Slavery, and the Philosophy of History*. Durham, NC: Duke University Press.

Benjamin, Walter (1920). "The Right to Use Force," in *Selected Writings Vol. 1*. Cambridge, MA: Belknap Harvard, 231-234.

Benjamin, Walter (1921a). "Critique of Violence," *ibid*., 236-252.

Benjamin, Walter (1921b). "The Meaning of Time in the Moral Universe," *ibid*., 286-7.

Benjamin, Walter (1921c). "Capitalism as Religion," *ibid*., 288-291.

Benjamin, Walter (1929). "Surrealism: The Last Snapshot of the European Intelligentsia," in *Selected Writings Vol. 2 Part 1*. Cambridge, MA: Belknap Harvard, 207-221.

Benjamin, Walter (1931a). "Theological Criticism," in *Selected Writings Vol. 2 Part 2*. Cambridge, MA: Belknap Harvard, 428-432.

Benjamin, Walter (1931b). "Karl Kraus," *ibid*., 433-458.

Benjamin, Walter (1931c). "Literary History and the Study of Literature," *ibid*., 459-465.

Benjamin, Walter (1936). "The Storyteller: Observations on the Works of Nikolai Leskov," in *Selected Writings Vol. 3*. Cambridge, MA: Belknap Harvard, 143-166.

Benjamin, Walter (1937). "Eduard Fuchs, Collector and Historian," *ibid*., 260-304.

Benjamin, Walter (1938a). "Theological-Political Fragment," *ibid*., 305-6.

Benjamin, Walter (1938b). "The Study Begins with Some Reflections on the Influence of *Les Fleurs du mal*," in *Selected Writings Vol. 4*. Cambridge, MA: Belknap Harvard, 95-97.

Benjamin, Walter (1938c). "Exchange with Theodor W. Adorno on 'The Paris of the Second Empire in Baudelaire,'" *ibid.*, 99-115.

Benjamin, Walter (1938d). "A Chronicle of Germany's Unemployed," *ibid*., 126-135.

Benjamin, Walter (1939a). "Central Park," *ibid*., 161-199.

Benjamin, Walter (1939b). "Commentary on Poems by Brecht," *ibid*., 215-250.

Benjamin, Walter (1940a). "Introduction to 'The Regression of Poetry,' by Carl Gustav Jochmann," *ibid*., 356-365.

Benjamin, Walter (1940a). "On the Concept of History," *ibid*., 389-400.

Benjamin, Walter (1940b). "Paralipomena to 'On the Concept of History,'" *ibid*., 401-411.

Benjamin, Walter (1999). *The Arcades Project*. Cambridge, MA: Belknap Harvard.

Blanchot, Maurice (1995). *The Writing of the Disaster*. Trans. Ann Smock. Lincoln, NE: University of Nebraska Press.

Bloch, Marc (1961). *Feudal Society*. Vol. 1. Chicago: University of Chicago Press.

Braidotti, Rosi (2002). *Metamorphoses: Towards a Materialist Theory of Becoming*. Malden, MA: Polity Press.

Bridge, Gavin and Andrew Wood (2010). "Less is more: Spectres of scarcity and the politics of resource access in the upstream oil sector," *Geoforum* 41: 565-576.

Buck-Morss, Susan (1989). *The Dialectics of Seeing: Walter Benjamin and the Arcades Project*. Cambridge, MA: MIT Press.

Butler, Judith (1993). *Bodies that Matter: On the Discursive Limits of "Sex."* London: Routledge.

Ceccarelli, Giovanni (2001). "Risky Business: Theological and Canonical Thought on Insurance from the Thirteenth to the Seventeenth Century." *Journal of Medieval and Early Modern Studies* 31(3): 607-658.

Cooper, Melinda (2010) "Turbulent Worlds: Financial Markets and Environmental Crisis," *Theory, Culture & Society* 27(2-3): 167-190.

de Goede, Marieke and Samuel Randalls (2009). "Precaution, preemption: arts and technologies of the actionable future," *Environment and Planning D* 27: 859-878.

Defoe, Daniel (1697). *An Essay Upon Projects*. London.

Derrida, Jacques (1984a) "No Apocalypse, Not Now (Full Speed Ahead, Seven Missiles, Seven Missives," *Diacritics* 14(2): 20-31.

Derrida, Jacques (1984b). "Of an Apocalyptic Tone Recently Adopted in Philosophy," *Oxford Literary Review* 6(2): 3-37.

Derrida, Jacques (1992). "Force of Law: The 'Mystical Foundation of Authority,'" in Drucilla Cornell, Michel Rosenfeld, and David Gray Carlson, eds., *Deconstruction and the Possibility of Justice*. New York: Routledge.

Deleuze, Gilles (1994). *Difference and Repetition*. New York: Columbia University Press.

Deleuze, Gilles and Felix Guattari (1983). *Anti-Oediups*. Minneapolis: University of Minnesota Press.

Deleuze, Gilles and Felix Guattari (1987). *A Thousand Plateaus*. Minneapolis: University of Minnesota Press.

Dillard, Annie (1989). *The Writing Life*. New York: Harper and Row.

Dupuy, Jean-Pierre (2013). *The Mark of the Sacred*. Stanford, CA: Stanford University Press.

Dupuy, Jean-Pierre (2015). *A Short Treatise on the Metaphysics of Tsunamis*. East Lansing, MI: Michigan State University Press.

Eliot, T. S. (2001). *The Waste Land*. Ed. Michael Eliot North. New York: W. W. Norton & Co.

Enzensberger, Hans Magnus (1978). "Two Notes on the End of the World," *New Left Review* 110: 74-79.

Ericson, R., Doyle, A., and Barry, D. (2003). *Insurance as Governance*. Toronto: University of Toronto Press.

Ewald, Francois (1991). "Insurance and risk," in Graham Burchell, Colin Gordon and Peter Miller, eds., *The Foucault Effect: Essays in Governmentality*. Chicago: University of Chicago Press.

Ewald, Francois (2002). "The Return of Descartes's Malicious Demon: An Outline of a Philosophy of Precaution," in Tom Baker and Jonathan Simon, eds., *Embracing Risk: The Changing Culture of Insurance and Responsibility*. Chicago: University of Chicago Press.

Fine, Gary Alan (2007). *Authors of the Storm: Meteorologists and the Culture of Prediction*. Chicago: The University of Chicago Press.

Foucault, Michel (1978). *History of Sexuality*. New York: Random House.

Gallison, Peter (2001). "War against the Center," *Grey Room* 4: 5-33.

Gillespie, Tarleton (2014). "The Relevance of Algorithms" in Tarleton Gillespie, Pablo J. Boczkowski, and Kirsten A. Foot, eds., *Media Technologies: Essays on Communication, Materiality, and Society*. Cambridge, MA: MIT Press.

Grosz, Elizabeth (2008). *Chaos, Territory, Art: Deleuze and the Framing of the Earth.* New York: Columbia University Press.

Grove, Jairus (2015). "Of an Apocalyptic Tone Recently Adopted in Everything: Anthropocene or Peak Humanity?" *Theory and Event* 18(3).

Hilferding, Rudolf. *Finance Capital*. New York: Routledge, 1981.

Haraway, Donna (1988). "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies,* 14(3), pp. 575-599.

Johnson, Leigh (2011). "Climate change and the risk industry: the multiplication of fear and value," p. 185-202 in Richard Peet, Paul Robbins, and Michael J. Watts, eds., *Global Political Ecology*. New York: Routledge.

Johnson, Leigh (2013). "Catastrophe bonds and financial risk: Securing capital and rule through contingency," *Geoforum* 45: 30-40.

Johnson, Leigh (2014). "Geographies of Securitized Catastrophe Risk and the Implications of Climate Change," *Economic Geography* 90(2): 155-185.

Johnson, Leigh (2015). "Catastrophic fixes: Cyclical devaluation and accumulation through climate change impacts," *Environment and Planning A*: 1-19.

Katz, Cindi (1995) "Under the Falling Sky: Apocalyptic Environmentalism and the Production of Nature," pp. 276-82 in Antoni Callari, Stephen Cullenberg, and Carole Biewener (eds.) *Marxism in the Postmodern Age*. New York: The Guilford Press.

Knight, Frank H. (1921). *Risk, Uncertainty and Profit*. Boston: Houghton Mifflin Company.

Kopf, Edwin W. (1929). "Notes of the Origin and Development of Reinsurance." *Proceedings of the Casualty Actuarial Society* 16:22-91.

Levine, Baruch A. (1993). "Numbers 1-20." *The Anchor Bible*. Vol. 4A. New York: Doubleday, 403-432.

Lobo-Guerrero, Luis (2011). *Insuring Security: Biopolitics, security, and risk*. New York: Routledge.

Lerner, Ben (2014). *10:04*. New York: Picador.

LiPuma, Edward (2016). "Ritual in Financial Life," in Benjamin Lee and Randy Martin, eds., *Derivatives and the Wealth of Societies*. Chicago: University of Chicago Press.

MacKenzie, Donald (2006). *An Engine, Not a Camera: How Financial Models Shape Markets*. Cambridge, MA: MIT Press.

Masco, Joseph (2006). *The Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico*. Princeton, NJ: Princeton University Press.

McKittrick, Katherine (2006). *Demonic Grounds: Black Women and the Cartographies of Struggle*. Minneapolis, MN: Minnesota University Press.

Merchant, Carolyn (1980). *The Death of Nature: Women, Ecology and the Scientific Revolution*. San Francisco: Harper and Row.

Merchant, Carolyn (2016). *Autonomous Nature: Problems of Prediction and Control From Ancient Times to the Scientific Revolution*. New York: Routledge.

Moore, Jason (2015). *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. New York: Verso.

Munich Reinsurance (2012). *TOPICS Geo*. Munich.

Munich Reinsurance (2013). *TOPICS Geo*. Munich.

Munich Reinsurance (2014). *TOPICS Geo*. Munich.

Munich Reinsurance (2015). *TOPICS Geo*. Munich.

Munich Reinsurance (2016). *TOPICS Geo*. Munich.

Munich Reinsurance (2017). *TOPICS Geo*. Munich.

Norfield, Tony (2016). *The City: London and the Global Power of Finance*. London: Verso.

Oberholzner, Frank (2011). "From an Act of God to an Insurable Risk: The Change in the Perception of Hailstorms and Thunderstorms since the Early Modern Period." *Environment and History* 17: 133-152.

Pollard, Jane et al. (2008). "Firm Finances, weather derivatives and geography," *Geoforum* 39: 616-624.

Powell, Kenneth (1994). *Lloyd's Building: Richard Rogers Partnership*. New York: Phaidon.

Serres, Michael (2000). *The Birth of Physics*. Trans. Jack Hawkes. Manchester: Clinamen.

Smith, Neil (2008). *Uneven Development*. Athens, Georgia: The University of Georgia Press.

Sontag, Susan (1966). "The imagination of disaster," in *Against Interpretation and Other Essays*. New York: Picador, 209-225.

Sorel, Georges (1999). *Reflections on Violence*. Ed. Jeremy Jennings. Cambridge, UK: Cambridge University Press.

Sturm, Tristan and Oh, Eric (2010). "Natural disasters as the end of the insurance industry? Scalar competitive strategies, Alternative Risk Transfers, and the economic crisis." *Geoforum* 41: 154-163.

Sturken, Marita (2001) "Desiring the Weather: El Nino, the Media, and California Identity" *Public Culture* 13(2): 161-189.

Swiss Reinsurance (2014a). *Modelling for a complex and growing peril*. Zurich.

Swiss Reinsurance (2014b). *The big one: The East Coast's USD 100 billion hurricane event*. Zurich.

Swiss Reinsurance (2015a). *Four earthquakes in 54 days*. Zurich.

Swiss Reinsurance (2015b). *Winter storms in Europe: messages from forgotten catastrophes*. Zurich.

Swiss Reinsurance (2016). "World insurance in 2015: steady growth amid regional disparities." *Sigma 3/2016*. Zurich.

Swyngedouw, Erik (2010) "Apocalypse Forever? Post-political Populism and the Spectre of Climate Change," *Theory, Culture & Society* 27(2-3): 213-232.

Risk Management Solutions (2007). *The 1679 Sanhe-Pinggu Earthquake: Implications for the Modern-Day Beijing Region.* Newark, CA.

Risk Management Solutions (2013). *1868 Hayward Earthquake: 145 Year Retrospective.* Newark, CA.

Thomas, Mary (2011). *Multicultural Girlhood: Racism, Sexuality, and the Conflicted Spaces of American Education*. Philadelphia: Temple University Press.

Weheliye, Alexander (2014). *Habeas Viscus: Racializing Assemblages, Biopolitics, and Black Feminist Theories of the Human.* Durham, NC: Duke University Press.

Weigel, Sigrid (1996). *Body- and Image-Space: Re-reading Walter Benjamin*. New York: Routledge.

White, Hayden (1980). "The Value of Narrativity in the Representation of Reality," *Critical Inquiry*, Autumn: 5-27.

Zalik, Anna (2010). "Oil 'futures': Shell's Scenarios and the social constitution of the global oil market," *Geoforum* 41: 553-564.

XIV. Vita

Place of Birth

Dallas, TX

Education

Bachelor of Arts in English – May 2012
Wesleyan University, Middletown, CT

Academic Employment

Graduate Teaching Assistant – August 2015-present
University of Kentucky, Lexington, KY

Robby Hardesty